CLAIMS

What is claimed is:

1. A method for collecting a Global Positioning System ("GPS") almanac with a partial almanac collection system ("PACS"), the method comprising:

receiving a request for a GPS almanac download from a call processor; and

receiving the GPS almanac in a piecewise process at the PACS.

2. The method of claim 1, where the piecewise process includes:

receiving a plurality of sub-sets of the GPS almanac; and

storing the plurality of sub-sets of the GPS almanac into a memory device.

3. The method of claim 2, where the piecewise process further includes:

determining when the last sub-set of the plurality of sub-sets of the GPS almanac has been received; and

combining all the sub-sets of the plurality of sub-sets of the GPS almanac to create a full GPS almanac.

4. The method of claim 3, where receiving a plurality of sub-sets of the GPS almanac includes receiving the plurality of sub-sets of the GPS almanac at a GPS module.

5. A method for collecting a Global Positioning System ("GPS") almanac with a partial almanac collection system ("PACS"), the method comprising:

receiving a request from a call processor to perform a piecewise almanac download with the PACS; and

downloading the almanac in a piecewise process.

6. The method of claim 5, further including determining whether a full almanac was downloaded.

7. The method of claim 6, further including responding to the call processor with a status of full almanac.

8. The method of claim 7, further including receiving an open session request from the call processor.

9. The method of claim 7, further including receiving a close session request from the call processor.

10. The method of claim 8, further including determining whether the call processor requested a close session.

11. The method of claim 6, further including:

responding to the call processor with a status of collected almanac for each call processor request;

receiving from the call processor a periodic request to collect almanac;

downloading a piecewise almanac; and

determining whether a full almanac was downloaded.

12. The method of claim 11, further including responding to the communication module with a status of full almanac.

13. The method of claim 12, further including receiving an open session request from the call processor.

14. The method of claim 13, further including receiving a close session request from the call processor.

15. The method of claim 5, further including determining whether enough time is available to complete a full almanac download.

16. The method of claim 15, further including reporting status of full almanac to the call processor.

17. The method of claim 16, further including receiving an open session request from the call processor.

18. The method of claim 17, further including receiving a close session request from the call processor.

19. The method of claim 17, further including storing almanac to a memory device.

20. The method of claim 19, further including sending acknowledgment to the call processor.

21. The method of claim 15, further including determining whether the call processor performed a session close before the full almanac was downloaded.

22. The method of claim 21, further including responding to the call processor with a status of partial almanac.

23. The method of claim 21, further including receiving an open session request from the call processor.

24. The method of claim 23, further including receiving a close session request from the call processor.

25. The method of claim 23, further including storing almanac to a memory device.

26. The method of claim 25, further including sending acknowledgment to the call processor.

27. The method of claim 26, further including determining whether the signal conditions changed in a way that caused PACS to collect only a partial almanac.

28. The method of claim 27, further including responding to the call processor with a status of partial almanac.

29. The method of claim 28, further including receiving an open session request from the call processor.

30. The method of claim 29, further including receiving a close session request from the call processor.

31. The method of claim 30, further including storing the almanac to a memory device.

32. The method of claim 31, further including sending an acknowledgment to call processor.

33. The method of claim 27, further including determining whether PACS can collect the entire almanac with a certain time.

34. The method of claim 33, further including responding to call processor that almanac cannot be collected.

35. The method of claim 34, further including receiving an open session request from the call processor.

36. The method of claim 35, further including receiving a close session request from the call processor.

37. The method of claim 35, further including storing almanac to a memory device.

38. The method of claim 37, further including sending an acknowledgment to the call processor.

39. A partial almanac collection system in signal communication with a call processor, the partial almanac collection system comprising:

a global positioning system ("GPS") module; and

a controller in signal communication with the GPS module and the call processor, the controller instructing the GPS module to collect piecewise almanac data in response to a request from the call processor.

40. The partial almanac collection system of claim 39, further including a memory unit in signal communication with the GPS module.

41. The partial almanac collection system of claim 40 wherein the GPS module is capable of processing received GPS signals.

42. The partial almanac collection system of claim 41, wherein the GPS module is capable of receiving a plurality of sub-sets of the GPS almanac.

43. The partial almanac collection system of claim 42, further including a memory unit in signal communication with the GPS module.

44. The partial almanac collection system of claim 43, wherein the controller is capable of storing the plurality of sub-sets of the GPS almanac into the memory unit.

45. The partial almanac collection system of claim 44, wherein the controller is capable of:

determining when the last sub-set of the plurality of sub-sets of the GPS almanac has been received; and

combining all the sub-sets of the plurality of sub-sets of the GPS almanac to create a full GPS almanac.

46. A Global Positioning System ("GPS") almanac with a partial almanac collection system ("PACS") for collecting a Global Positioning System ("GPS") almanac, the PACS comprising:

means for receiving a request for a GPS almanac download from a call processor; and

means for receiving the GPS almanac in a piecewise process at the PACS.

47. The PACS of claim 46, where the means for receiving the GPS almanac in a piecewise process includes:

means for receiving a plurality of sub-sets of the GPS almanac; and

means for storing the plurality of sub-sets of the GPS almanac into a memory device.

48. The PACS of claim 47, where the means for receiving the GPS almanac in a piecewise process further includes:

means for determining when the last sub-set of the plurality of sub-sets of the GPS almanac has been received; and

means for combining all the sub-sets of the plurality of sub-sets of the GPS almanac to create a full GPS almanac.

49. The PACS of claim 48, where the means for receiving a plurality of sub-sets of the GPS almanac includes means for receiving the plurality of sub-sets of the GPS almanac at a GPS module.

50. A partial almanac collection system ("PACS") for collecting a Global Positioning System ("GPS") almanac, the PACS comprising:

means for receiving a request from a call processor to perform a piecewise almanac download with the PACS; and

means for downloading the almanac in a piecewise process.

51. The PACS of claim 50, further including means for determining whether a full almanac was downloaded.

52. The PACS of claim 51, further including means for responding to the call processor with a status of full almanac.

53. The PACS of claim 51, further including:

means for responding to the call processor with a status of collected almanac for each call processor request;

means for receiving from the call processor a periodic request to collect almanac;

means for downloading a piecewise almanac; and

means for determining whether a full almanac was downloaded.

54. The PACS of claim 53, further including means for responding to the communication module with a status of full almanac.

55. The PACS of claim 53, further including means for determining whether enough time is available to complete a full almanac download.

56. The PACS of claim 55, further including means for reporting status of full almanac to the call processor.

57. The PACS of claim 56, further including means for receiving an open session request from the call processor.

58. The PACS of claim 56, further including means for receiving a close session request from the call processor.

59. The PACS of claim 56, further including means for storing almanac to a memory device.

60. The PACS of claim 59, further including means for sending acknowledgment to the call processor.

61. The PACS of claim 55, further including means for determining whether the call processor performed a session close before the full almanac was downloaded.

62. The PACS of claim 61, further including means for responding to the call processor with a status of partial almanac.

63. The PACS of claim 61, further including means for receiving an open session request from the call processor.

64. The PACS of claim 63, further including means for receiving a close session request from the call processor.

65. The PACS of claim 63, further including means for storing almanac to a memory device.

66. The PACS of claim 65, further including means for sending acknowledgment to the call processor.

67. The PACS of claim 66, further including means for determining whether the signal conditions changed in a way that caused PACS to collect only a partial almanac.

68. A partial almanac collection system in signal communication with a call processor, the partial almanac collection system comprising:

a global positioning system ("GPS") module; and

means for instructing the GPS module to collect piecewise almanac data in response to a request from the call processor where the instructing means is in signal communication with the GPS module and the call processor.

69. The partial almanac collection system of claim 68, further including a memory unit in signal communication with the GPS module.

70. The partial almanac collection system of claim 69 wherein the GPS module is capable of processing received GPS signals.

71. The partial almanac collection system of claim 70, wherein the GPS module is capable of receiving a plurality of sub-sets of the GPS almanac.

72. The partial almanac collection system of claim 71, further including a memory unit in signal communication with the GPS module.

73. The partial almanac collection system of claim 72, wherein the means for instructing includes means for storing the plurality of sub-sets of the GPS almanac into the memory unit.

74. The partial almanac collection system of claim 73, wherein the means for instructing includes:

means for determining when the last sub-set of the plurality of sub-sets of the GPS almanac has been received; and

means for combining all the sub-sets of the plurality of sub-sets of the GPS almanac to create a full GPS almanac.

75. A signal-bearing medium having software for collecting a Global Positioning System ("GPS") almanac with a partial almanac collection system ("PACS"), the signal-bearing medium comprising:

logic configured for receiving a request for a GPS almanac download from a call processor; and

logic configured for receiving the GPS almanac in a piecewise process at the PACS.

76. The signal-bearing medium of claim 75, where the logic configured for receiving the GPS almanac in a piecewise process at the PACS includes:

logic configured for receiving a plurality of sub-sets of the GPS almanac; and

logic configured for storing the plurality of sub-sets of the GPS almanac into a memory device.

77. The signal-bearing medium of claim 76, where the logic configured for receiving the GPS almanac in a piecewise process at the PACS includes:

logic configured for determining when the last sub-set of the plurality of sub-sets of the GPS almanac has been received; and

logic configured for combining all the sub-sets of the plurality of sub-sets of the GPS almanac to create a full GPS almanac.

78. The signal-bearing medium of claim 77, where the logic configured for receiving a plurality of sub-sets of the GPS almanac includes logic configured for receiving the plurality of sub-sets of the GPS almanac at a GPS module.

79. A signal-bearing medium having software for collecting a Global Positioning System ("GPS") almanac with a partial almanac collection system ("PACS"), the signal-bearing medium comprising:

logic configured for receiving a request from a call processor to perform a piecewise almanac download with the PACS; and

logic configured for downloading the almanac in a piecewise process.

80. The signal-bearing medium of claim 79, further including logic configured for determining whether a full almanac was downloaded.

81. The signal-bearing medium of claim 80, further including logic configured for responding to the call processor with a status of full almanac.

82. The signal-bearing medium of claim 81, further including logic configured for receiving an open session request from the call processor.

83. The signal-bearing medium of claim 81, further including logic configured for receiving a close session request from the call processor.

84. The signal-bearing medium of claim 82, further including logic configured for determining whether the call processor requested a close session.

85. The signal-bearing medium of claim 80, further including:

logic configured for responding to the call processor with a status of collected almanac for each call processor request;

logic configured for receiving from the call processor a periodic request to collect almanac;

logic configured for downloading a piecewise almanac; and

logic configured for determining whether a full almanac was downloaded.

86. The signal-bearing medium of claim 85, further including logic configured for responding to the communication module with a status of full almanac.

87. The signal-bearing medium of claim 86, further including logic configured for receiving an open session request from the call processor.

88. The signal-bearing medium of claim 87, further including logic configured for receiving a close session request from the call processor.

89. The signal-bearing medium of claim 79, further including logic configured for determining whether enough time is available to complete a full almanac download.

90. The signal-bearing medium of claim 89, further including logic configured for reporting status of full almanac to the call processor.

91. The signal-bearing medium of claim 90, further including logic configured for receiving an open session request from the call processor.

92. The signal-bearing medium of claim 91, further including logic configured for receiving a close session request from the call processor.

93. The signal-bearing medium of claim 91, further including logic configured for storing almanac to a memory device.

94. The signal-bearing medium of claim 93, further including logic configured for sending acknowledgment to the call processor.

95. The signal-bearing medium of claim 89, further including logic configured for determining whether the call processor performed a session close before the full almanac was downloaded.

96. The signal-bearing medium of claim 95, further including logic configured for responding to the call processor with a status of partial almanac.

97. The signal-bearing medium of claim 95, further including logic configured for receiving an open session request from the call processor.

98. The signal-bearing medium of claim 97, further including logic configured for receiving a close session request from the call processor.

99. The signal-bearing medium of claim 97, further including logic configured for storing almanac to a memory device.

100. The signal-bearing medium of claim 99, further including logic configured for sending acknowledgment to the call processor.

101. The signal-bearing medium of claim 100, further including logic configured for determining whether the signal conditions changed in a way that caused PACS to collect only a partial almanac.

102. The signal-bearing medium of claim 101, further including logic configured for responding to the call processor with a status of partial almanac.

103. The signal-bearing medium of claim 102, further including logic configured for receiving an open session request from the call processor.

104. The signal-bearing medium of claim 103, further including logic configured for receiving a close session request from the call processor.

105. The signal-bearing medium of claim 104, further including logic configured for storing the almanac to a memory device.

106. The signal-bearing medium of claim 105, further including logic configured for sending an acknowledgment to call processor.

107. The signal-bearing medium of claim 101, further including logic configured for determining whether PACS can collect the entire almanac with a certain time.

108. The signal-bearing medium of claim 107, further including logic configured for responding to call processor that almanac cannot be collected.

109. The signal-bearing medium of claim 108, further including logic configured for receiving an open session request from the call processor.

110. The signal-bearing medium of claim 109, further including logic configured for receiving a close session request from the call processor.

111. The signal-bearing medium of claim 109, further including logic configured for storing almanac to a memory device.

112. The signal-bearing medium of claim 111, further including logic configured for sending an acknowledgment to the call processor.